

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

GARY GIBSON, JR. and SHAWNA)	CASE NO. 8:16-cv-296
GIBSON, Husband and Wife,)	
)	
Plaintiffs,)	
)	DEFENDANTS DISCLOSURE OF
vs.)	EXPERT TESTIMONY
)	
BRIESON JENSEN and FARMERS)	
CO-OPERATIVE,)	
)	
Defendants.)	

COME NOW, the Defendants, pursuant to Fed. R. Civ. P. 26(a)(2)(B) and (a)(2)(C) and the Court's Progression Order (Filing No. 15) and hereby disclose the following expert witnesses:

Arnold G. Wheat
ACTAR Reg. #226
Accident Reconstruction Specialist
Accident Reconstruction Services, Inc.
4964 Ward Road
Wheat Ridge, CO 80033
(303) 403-9045
Arnold@crashlogistics.com

David W. Lohf
ACTAR Reg. #1081
Accident Reconstruction Specialist
Accident Reconstruction Services, Inc.
4964 Ward Road
Wheat Ridge, CO 80033
(303) 403-9045
David@crashlogistics.com

- (a) Mr. Wheat and Mr. Lohf will render professional opinions based upon their education, training, and experience and will express the opinions contained within the attached report dated April 3, 2017, which also includes the basis and reasons for said opinions.
- (b) The facts and data considered by Mr. Wheat and Mr. Lohf in forming their opinions is identified within the attached report.
- (c) The documents relied upon by Mr. Wheat and Mr. Lohf, as identified in the attached report, may be used as exhibits to summarize or support his opinions.



- (d) A copy of Mr. Wheat's curriculum vitae is attached hereto.
- (e) A copy of Mr. Lohf's curriculum vitae is attached hereto.
- (f) A copy of the fee schedule for Mr. Wheat and Mr. Lohf is attached hereto.
- (g) A copy of Mr. Wheat's testimony history is attached hereto.
- (h) A copy of Mr. Lohf's testimony history is attached hereto.

BRIESON JENSEN and FARMERS CO-
OPERATIVE, Defendants

By: Baylor, Evnen, Curtiss, Grit & Witt, LLP
Wells Fargo Center
1248 "O" Street, Suite 600
Lincoln, NE 68508
402/475-1075
rgoyette@baylorevnen.com

By: /s/ Randall L. Goyette
Randall L. Goyette, # 16251

ACCIDENT RECONSTRUCTION SERVICES, INC.

Collision Analysis and Traffic Accident Reconstruction

4964 WARD ROAD ° WHEAT RIDGE, CO 80033 ° 303-403-9045 ° FAX 303-403-9401 ° ars@crashlogistics.com

Preliminary Collision Reconstruction & Analysis

Gary Gibson, Jr. and Shawna Gibson v. Farmers' Co-operative
United States District Court, District of Nebraska
Case No.: 8:16-cv-296
April 3, 2017

Client:

Mr. Randall L. Goyette
Attorney at Law
Baylor, Evnen, Curtiss,
Grimit & Witt, L.L.P.
1248 O Street Suite 600
Lincoln, NE 68508

Assignment Overview

Our firm has developed information and completed an initial collision reconstruction and analysis of a motor vehicle traffic accident that occurred on Wednesday, June 26, 2013, at approximately 3:37 p.m. The accident happened at the intersection of County Road 857 with Nebraska State Highway 57 in a rural portion of Wayne County, Nebraska. A 2006 Kenworth® T600 truck tractor and attached Manac® drop-deck semi-trailer operated by Gary Gibson, and a 2007 AGCO "RoGator®" fertilizer spreader operated by Brieson Jensen, were involved in the accident event. Officers from the Wayne County Sheriff Department investigated the collision.

This report summarizes the initial observations, opinions and findings developed by Arnold Wheat and David Lohf during the preliminary forensic evaluation and reconstruction of the collision. The preliminary observations, opinions and findings stated throughout this report were made within a reasonable degree of probability, utilizing the scientific field of traffic accident reconstruction.

Analyst's Background

Arnold Wheat has more than 40 years' experience in the field of Traffic Accident Investigation and Reconstruction. His professional experience background in law enforcement includes employment as a police officer with the Arvada (Colorado) Police Department and the State of New York. He has received judicial approval to offer expert witness testimony in the areas of Traffic Accident Investigation and Reconstruction in U.S. District Courts and numerous judicial districts throughout Colorado, Florida, Hawaii, Kansas, Montana, South Dakota, Nebraska, Tennessee and Wyoming. Mr. Wheat has authored the book, Accident Investigation, co-authored two additional instructional manuals and has published numerous technical articles related to traffic accident investigation and collision reconstruction.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Two

Mr. Wheat has taught courses in Accident Investigation and Reconstruction for many law enforcement and transportation-related organizations in the United States, Canada and Mexico, including the American Trucking Association, the Rocky Mountain Institute for Transportation Safety, the Colorado Motor Carrier Association, the Institute of Police Technology and Management, the North American Transportation Management Institute and the Society of Accident Reconstructionists. He is past Chairman of the Accreditation Commission for Traffic Accident Reconstruction (ACTAR), and was a participant on the National Highway Traffic Safety Administration's (NHTSA) Task Force on *"Minimum Training Criteria for Police Traffic Accident Reconstructionists"*. As the current Chairman of the Society of Accident Reconstructionists (SOAR), Mr. Wheat serves as an editor and contributor to the quarterly magazine, *The SOARce*, an instructional publication for accident investigators and reconstructionists.

David Lohf also has approximately 40 years' experience in traffic accident investigation and reconstruction, beginning his professional career in law enforcement as a Trooper with the Colorado State Patrol, and rising through the ranks to retire as Troop Commander. His extensive knowledge of traffic accident investigation and reconstruction was obtained by investigating or supervising the investigation of more than 5,000 traffic accidents that occurred in both urban and rural locations. Mr. Lohf's instructional credentials include classes in Basic Accident Investigation, Technical Accident Investigation and Truck Accident Investigation for the Colorado State Patrol and the Colorado Law Enforcement Training Academy, as well as classes in Motor Fleet Traffic Accident Investigation for the North American Transportation Management Institute. He is accredited as a traffic accident reconstructionist through the Accreditation Commission for Traffic Accident Reconstruction (ACTAR), and has been designated an expert witness in Traffic Accident Investigation and Reconstruction in District Courts within Colorado, Nebraska and Ohio. As past Chairman of the Society of Accident Reconstructionists (SOAR), Mr. Lohf serves as an editor of the quarterly accident investigation publication, *The SOARce*.

Further information relating to Mr. Wheat and Mr. Lohf can be viewed within their respective Rule 26(a) disclosures.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Three

Documents Reviewed and Developed During Analysis

At this point in our initial investigation of the traffic accident, we have reviewed and/or developed the following documents and information:

- State of Nebraska Investigator's Motor Vehicle Accident Report
- State of Nebraska Investigator's Supplemental Truck and Bus Accident Report
- Interview with the investigating officer, Deputy Jesse Frank of the Wayne County Sheriff Department
- Printed transcripts, with exhibits, of the Sworn Depositions of
 - Gary Gibson, Jr., taken on December 29, 2016
 - Tristen Gibson, taken on December 29, 2016
 - Briesen Jensen, taken on December 15, 2016
 - Aaron Becker, taken on February 13, 2017
- Amended Complaint and Jury Demand
- Answer to Complaint
- Plaintiff's Initial Disclosures
- Defendant's Initial Disclosures
- Plaintiff's Expert Disclosures
- Briesen Jensen's Answers to Interrogatories
- Briesen Jensen's Responses to Requests for Production of Documents
- Farmer's Cooperative Answers to Interrogatories
- Farmer's Cooperative Responses to Requests for Production of Documents
- Gary Gibson's Answers to Interrogatories
- Gary Gibson's Responses to Requests for Production of Documents
- Shawna Gibson's Answers to Interrogatories
- Shawna Gibson's Responses to Requests for Production of Documents
- Color photographs taken at the accident scene
- Satellite photograph of the collision site and surrounding area obtained from Google Earth®
- Color photographs depicting the damaged Kenworth® W900 truck tractor
- Color photographs of the damaged AGCO RoGator® farm equipment
- Background material, manufacture-supplied specifications and dimensional data regarding the 2006 Kenworth® W900L truck tractor and the attached 2013 Manac-USA® step-deck semi-trailer

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Four

- Background material and data concerning the Highway Equipment Company® product bin utilized on the AGCO RoGator® farm implement
- Copies of photographs depicting a 2007 AGCO Corporation "RoGator®" fertilizer spreader
- Background information and manufacturer-supplied specifications for the 2007 AGCO "RoGator®" fertilizer spreader
- Personal examination, field measurements and photographic documentation of several exemplar AGCO Corporation "RoGator®" fertilizer spreaders
- Federal Motor Carrier Safety Administration's Safety Management Systems and "Snapshot" data for "Phil Sims Trucking LLC",
- Highway engineering data from the Nebraska Department of Roads, some of which was obtained from the State of Nebraska Attorney General's Office
- Highway engineering data from the Wayne County Department of Public Works
- Forensic documentation of the line-of-sight in the northbound approach to the County Road 857 intersection
- Examination, field measurements and photographic documentation of the highway and intersection where the crash occurred
- Forensic mapping of the area of State Highway 57 where the collision occurred, utilizing a Leica® total station electronic measuring instrument
- Meteorological and astronomical data regarding the location of the accident on the date of June 26, 2013
- Report by Stephen Sokol, PE, JD, submitted on February 1, 2017
- Transcript of deposition of Stephen Sokol, P.E. taken on March 27, 2017

Analysis of the Law Enforcement Investigation

Information contained within the State of Nebraska Investigator's Motor Vehicle Accident Report, indicated that Deputy Jesse Frank of the Wayne County Sheriff Department investigated the collision at the scene of the event. Deputy Frank prepared the official accident report under the Agency Case reference 062713. In that report, Deputy Frank indicated that the collision event occurred when the 2006 Kenworth T600 truck tractor and attached Manac drop-deck semi-trailer collided with the left side of the AGCO "RoGator®" farm implement.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Five

The collision between the motor vehicle and the farm implement happened at a four-way junction of State Highway 57 with a local county road. The primary roadway was straight, on a slope, and had a dry, blacktop surface composition. State Highway 57 had two lanes, with no median separating the two directions of travel. According to the investigating sheriff deputy, no environmental or roadway circumstances contributed to the occurrence of the collision. Information on the accident report also indicated that the collision event occurred during daylight hours, at a time when no adverse weather conditions were present in the atmosphere, and the ambient temperature was approximately 90 degrees.

At the time of the collision, the 2006 Kenworth® T600 truck tractor and attached Manac® drop-deck semi-trailer was traveling northbound on Nebraska State Highway 57, and was in the process of overtaking a farm implement, identified as a AGCO "RoGator®" fertilizer spreader. In the sequence of the collision events, the deputy identified "*cross median/centerline*" as the first event, "*collision with a motor vehicle in transport*" as the second event, a departure off the left side of the highway as the third event, and a "*fire/explosion*" as the fourth and "*most harmful event*".

The "RoGator®" farm equipment was also traveling northbound on State Highway 57. According to the accident report, when impact occurred, the crop sprayer was making a left turn onto County Road 857. Impact with the truck tractor and semi-trailer was described as a "*collision with a motor vehicle in transport*", which was also classified as the "*most harmful event*" related to that vehicle.

Deputy Frank indicated on the accident report that the posted speed limit on State Highway 57 was 60 m.p.h. No estimated speed was listed for either vehicle. The officer indicated on the report that "*inattention*" on the part of the driver of the 2006 Kenworth® T600 truck tractor and attached Manac® drop-deck semi-trailer contributed to the cause of the collision. The deputy listed "*no improper driving*" for the operator of the farm implement.

The 2006 Kenworth® T600 truck tractor and attached semi-trailer was owned by Phil Sims Trucking LLC. of Otis, Colorado. Gary Gibson, the driver of the Kenworth commercial motor vehicle, was one of two occupants within the vehicle at the time of the crash. Mr. Gibson was properly utilizing the shoulder and lap belt installed within the vehicle, and was not ejected from nor trapped within the vehicle. He sustained evident

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Six

and disabling injuries to his shoulder/upper arm, as noted within the report data. A 14-year-old male, identified as Tristen Gibson, was seated within the right-front seat of the Kenworth vehicle. He was also utilizing the lap and shoulder restraint system in the truck, and was not ejected from the vehicle. Tristen Gibson sustained visible injuries to the elbow/lower arm/hand region of his body. Both occupants of the Kenworth truck were transported to a medical facility by the Winside Rescue Unit.

Other notations made on the accident report indicated that "severe" damage was sustained on the right side of the Kenworth, with all areas of the commercial motor vehicle eventually sustaining severe damage, as a result of the various harmful events experienced by that vehicle. The truck and semi-trailer were eventually towed from the crash scene by D & L Towing.

Visible and disabling, left-front, physical damage was noted by the sheriff deputy on the AGCO "RoGator®" crop fertilizer implement, which was listed on the accident report as the first traffic unit. The crop fertilizer was eventually towed from the accident scene. That farm equipment was owned by Farmers Co-op, located in Winside, Nebraska. Brieson Jensen, the operator of the fertilizer spreader, was the only occupant of that farm implement. The fertilizer spreader was equipped with a seat belt lap restraint. Mr. Jensen was not ejected from the farm implement, but did sustain visible injuries to his head. He was also transported to a local medical facility by Winside Rescue Unit.

Deputy Frank noted that, in his opinion, the consumption of alcoholic beverages, illegal drugs and/or prescription medications was not a factor for either driver involved in the crash event. Therefore, he did not require any alcohol/drug testing of either driver. He also indicated that he did not believe that the crash location needed an engineering study. The accident location did not involve a highway work zone nor damage to state property. However, the deputy did list \$800.26 in damage to the road surface, which was under the control of the Nebraska Department of Roads.

Within the narrative section of the Traffic Accident Report, Deputy Frank summarized the accident, identifying Vehicle #1 as the AGCO RoGator® farm implement, and Vehicle #2 as the Kenworth® truck tractor and attached semi-trailer:

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Seven

"Vehicle #1 was northbound on Highway 57 attempting to turn left on 857 Road. Vehicle #2 was northbound on Highway 57 behind Vehicle 1. Driver 2 attempted to avoid colliding with the slower moving vehicle 1 by passing it on the left. The front right corner of Vehicle 2 collided with the front left tire of Vehicle 1. Vehicle 2 left the roadway after the collision and entered the west ditch. Vehicle 2 struck some trees and brush piles before colliding with a tree. Vehicle 2 then caught fire and burned. Vehicle 1 was spun and came to rest in the center of the highway. Vehicle 1 was a RoGator® dry fertilizer spreader."

Field measurements apparently collected by Deputy Frank at the accident scene were incorporated into a diagram included with the State of Nebraska Investigator's Motor Vehicle Accident Report. Those measurements included the following items:

- *Vehicle 2 skid to P.O.I – 236 feet*
- *P.O.I to final rest – 185.3N*
- *Front of #2 to roadway – 77.6 W*
- *P.O.I. to highway 57 & 857 Road Sign – 54.1 W*

That diagram, which has been displayed as Figure 1 on the following page, illustrated and summarized the movements of the commercial motor vehicle and the farm equipment, based upon the physical evidence and information developed by the investigating sheriff deputy during his investigation of the incident.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Eight

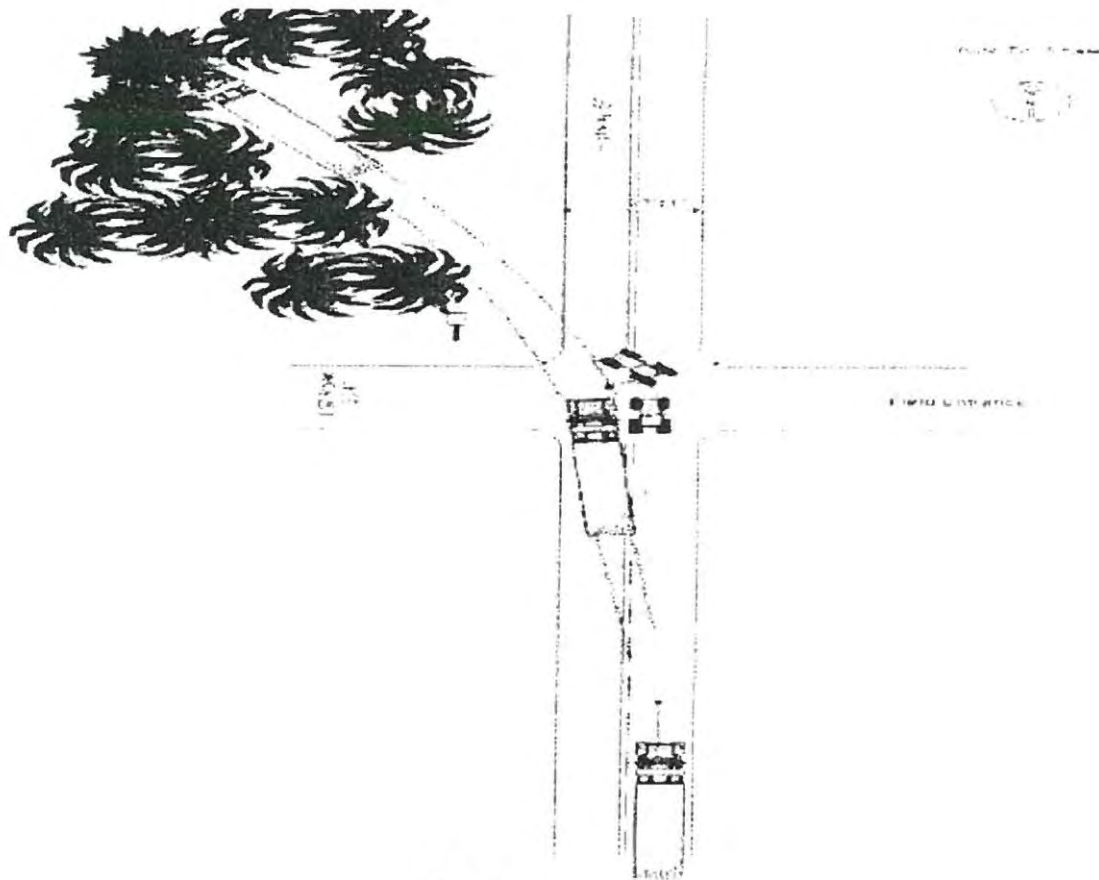


Figure 1



Figure 2 – view looking north toward collision area

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Nine



Figure 3 – looking south toward hillcrest from intersection area



Figure 4 – looking northwest from intersection toward area where the truck-trailer came to a stop within the trees

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Ten



Figure 5 – closer view of area where truck-trailer came to a stop

Analysis of Collision Location

The satellite image below, obtained from *Google Earth*®, illustrated the appearance of the general area surrounding the crash location. The north direction would be toward the top of the photographic image, with a compass direction of east oriented toward the right edge and west oriented toward the left edge. The approximate accident location has been marked with a yellow arrow.



Figure 6

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Eleven

As evident within Figure 6, the land usage surrounding the location of the traffic accident was predominantly related to agricultural operations. Development in the region was minimal-to-moderate, with land uses primarily associated with agricultural, field crops and livestock-related activities. Some residential structures were noted in the general area of the collision. Land area surrounding the crash location appeared to be lightly populated. The villages of Carroll and Winside were located to the north and south, respectively, of the accident location, with the small city of Wayne, Nebraska situated several miles southeast of the crash location.

The topography in the area was obviously non-uniform, with some minor-to-moderate variations in terrain elevations. Research of the land surface data, based on topographical mapping obtained from the U.S. Geological Survey, detailed the frequent variations of the land surfaces surrounding the accident location. That information was compared to the information developed during the on-scene investigation, and to the photographic documentation of the area surrounding the collision location, and was found to be consistent.



Figure 7 – topographical depiction of terrain features

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twelve

Nebraska State Highway 57 was classified as a "major arterial-continuous (intermediate)" highway by the Nebraska Department of Roads (NDOR), in that, it allowed vehicles to travel in a north/south direction, toward and away from several village/small town areas, and that it allowed numerous county/local roads to "feed" into it. The roadway also provided access and egress with several, east-to-west state highways.

The highway geometry, clear zone set-backs, and minimal roadside development, even with the moderate topographical variations within the accident segment of the highway, easily allowed for a line-of-sight in excess of 5,000 feet for northbound drivers in their approach to the accident area. Typical for a rural, arterial highway, the speed limit for all vehicles traveling in either direction through that highway segment was posted at 60 m.p.h. for all classifications of motor vehicles.

During the 2017 on-scene examinations of the accident location, it was noted that the roadway surface appeared to have been comprised of standard-quality, bituminous asphalt concrete material. There appeared to be a thin-coat, small aggregate, top surface within the travel lanes of the highway, with some wearing of the aggregate within the typical traveled paths of vehicle wheels. Research data indicated that the highway surface had been overlaid after the accident by NDOR. No substantial pavement surface abnormalities in the highway segment were noted within the scene photos. Any such abnormalities would have created an unsafe or hazardous road surface condition.

One northbound lane of travel and one southbound lane of travel were present within the accident area. Each travel lane was determined from field measurements to be approximately 11 to 12 feet in width. Contiguous to the outside of each of those travel lanes, a paved shoulder less than 2-feet wide existed for both travel directions. The entire width of the bituminous asphalt concrete surface was determined to be approximately 27 to 28 feet in dimension. Grass-covered shoulder areas, typically several feet in width, existed beyond the edges of the bituminous asphalt concrete material. The NDOR right-of-way was observed to vary at different locations at approximately 100-150 feet.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirteen



Figure 8 – looking north toward intersection from northbound lane of Highway 57

In the area of the accident, a local road identified by signage as *Road 857*, connected with State Highway 57 in an approximate 90-degree angular alignment. During the on-site documentation process, it was observed that Road 857 was comprised of natural soils, and only serviced various farm fields and related property. Signage associated with that roadway indicated the road was classified as a “minimum maintenance road” or field access road, as the infrastructure, safety features and width dimension farther west did not meet the common minimum standards of an “unpaved typical gravel road”. Apparently, the county filed a request with NDOR to obtain that classification. A view of that unimproved local road has been shown below as Figure 9.



Figure 9 – looking west on the field/minimal maintenance road

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Fourteen

Background data, ancillary photographic evidence and supplemental information available with respect to the accident indicated that no significant pavement surface irregularities, which would have been a causal or contributing factor for the collision event, existed on State Highway 57 at the time of the crash. Based on the data reviewed and considered, the indication was that the road surface had a dry condition at the time of the accident. Thus, the pavement surface in the accident area would have had typical frictional characteristics for bituminous asphalt concrete roads, which would have been foundational to any longitudinal and lateral movements of both the commercial motor vehicle and the farm implement.

Traffic control pavement markings documented in the accident area were determined to have typical formation, with the solid, continuous, white "fog line" having a width of approximately 4 inches for both the southbound and northbound lanes of travel. Both continuous solid white lines had retroreflective characteristics during daytime observations of the highway.

A separation between the northbound and southbound travel directions was created with a traffic control device placed on the pavement surface. A combination solid-and-broken pattern, retroreflective, "traffic yellow" painted set of lines was present to identify the separation between the northbound and southbound driving lanes of the highway. In the area of the intersection, the centerline markings created a "passing" zone for northbound traffic, but a "no passing" zone for southbound traffic ascending the hill. A measurement of that highway surface marking indicated that its edge-to-edge dimension was approximately 12 to 13 inches wide. It was determined that the centerline pavement markings were in good condition and allowed for daytime detection under ambient lighting conditions, and would have allowed good nighttime detection with headlight illumination. During the on-scene documentation process, it was observed that the centerline traffic control markings changed as the highway traversed various topographical features in the general area.

In addition to pavement markings, traffic control signs were posted in the general approach to the accident area for both northbound and southbound traffic movements. Those signs included regulatory, cautionary and informational messages, and were placed at appropriate locations relative to their message. Caution signs posted in the area of the collision included the identification of "*no passing zones*", as well as "*bridges may be icy*" and "*school bus stop ahead*". In 2013, NDOR data indicated that the

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Fifteen

annualized average daily traffic count on that segment of Highway 57 was 840 vehicles, with approximately 10% of those vehicles being *"heavy commercial vehicles"*.

Given the ground level height of vegetative growth adjacent to the highway at the time of the collision, those existing signs would have been very conspicuous, relative to the surrounding terrain. The traffic control signs had retroreflective sign-facing materials to assist with both daytime and nighttime conspicuity, as required by federal standards. According to the data reviewed, the regulatory speed limit within the collision area was 60 m.p.h., which was confirmed during the northbound and southbound inspection of the approach to the traffic crash location. That speed limit was consistent with a rural arterial highway.



Figure 10 – view looking north on Highway 57

The appearance of some of those pavement markings and lane configurations can be viewed within some of the photographs taken during the on-scene investigative activities conducted in March 2017; two of those photographs are shown below as Figures 11 and 12. Research data indicated that the striping pattern within that segment of Highway 57 had not changed since the time of the accident and that yearly painting of the pavement surface markings was part of the normal roadway maintenance procedure by NDOR.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Sixteen



Figures 11 and 12 – views looking north on State Highway 57

All traffic control devices within the collision area and the approaches to the area appeared to be in compliance with standards contained within the Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Edition (MUTCD). That highway standard was promulgated by the Federal Highway Administration, U.S. Department of Transportation, and was adopted as a highway traffic control standard by the State of Nebraska. The MUTCD would be mandatory on all public highways, roads pursuant to legal adoption within Chapter 60, Nebraska Rules of the Road Revised (*Statutes of Nebraska, Reissue of 2010 and 2010 Supplement*) which sets forth the responsibilities for the establishment of standards for the use of traffic control devices in the State of Nebraska.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Seventeen

Analysis of Accident Vehicles

It should be noted that neither of the two vehicles involved in the collision was personally inspected during the investigative and reconstruction process. The 2006 Kenworth® truck tractor was significantly damaged during the collision events, with additional physical damage created by the post-crash fire. Authorities with Phillip Sims Trucking eventually disposed of the vehicle. The AGCO RoGator® farm implement was repaired after the crash and subsequently put back into service, but was completely destroyed in a June 2014 tornado at the facilities of Farmers Co-operative in Pilger, Nebraska. Manufacturer specifications, dimensional data and the inspection of several exemplar vehicles were used to create data for the vehicles during the reconstruction and the forensic analysis process.

Kenworth truck and semi-trailer

A forensic analysis of the Vehicle Identification Number (VIN) included within the State of Nebraska Investigator's Motor Vehicle Accident Report was completed. That VIN, listed as 1XKWDB9X06J112668, indicated the vehicle was a 2006 Kenworth® truck tractor, but a model W900L, not a T600 model as shown on the police report.

The identified 2006 Kenworth® W900L truck tractor was a Class 8 commercial motor vehicle. It had a conventional cab with an attached mid-rise sleeper berth and equipment, Merritt®, three-door cab-protection "headache rack", storage compartment mounted to the rear of the back wall of the sleeper berth. A front grille guard structure was also attached to the front of the Kenworth vehicle. The truck was equipped with a Caterpillar® C15 diesel engine with a 14.6 liter displacement, and utilized a "6 x 4" drivetrain. The truck had a VIN-identified gross vehicle weight rating of between 47,000 and 57,000 pounds.

Manufacturer-supplied dimensional specifications indicated that the Kenworth® W900 had an overall length of approximately 25 to 28 feet, a width of about 8.5 feet, and a wheelbase length of approximately 22 to 24 feet. Some of the photographs that displayed the damaged Kenworth® W900 have been included on the following page.

As evident within the photographs, a significant number of components were damaged during the collision events, as well as during the subsequent fire that consumed the forward portion of the Kenworth® W900. A majority of that collision-related structural damage was within the forward portions of the heavy-duty truck tractor.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Eighteen



Figures 13 through 15 – views of the damaged Kenworth® W900

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Nineteen

To assist in the visualization of the Kenworth® truck tractor, several photos of exemplar 2006 Kenworth® W900L vehicles have been displayed below.



Figures 16 through 18 – exemplar 2006 Kenworth W900 truck tractors

The 2013 Manac® step-deck semi-trailer involved in the crash had a twin axle, with a spread formation, semi-trailer. The heavy-duty, low-profile semi-trailer was hauling an assortment of antique military vehicles. There was no indication that the semi-trailer or its load sustained any substantial physical damage during the crash event.



**Figures 19 and 20 –
views of the Manac®
step-deck semi-trailer**



April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty

Research into Phillip Sims Trucking L.L.C. through the Safety Management System of the Federal Motor Carrier Safety Administration indicated that the carrier was registered with USDOT #362045, and was an authorized interstate carrier of property, with machinery/large objects and livestock being the principle commodities transported. The registered business address for the carrier was a farm located at 35147 Washington County Road 42, in Otis, Colorado. The business reported that it had 10 drivers for 10 power units and 15 trailers. As of the last rating date of March 10, 2016, the motor carrier had a "Satisfactory" safety rating. The most current BASIC status for Phil Simms Trucking indicated "on-road performance" values within parameters, and with no acute or critical violations discovered.

Farm Implement

The AGCO Corporation "RoGator[®]" Model SS1074 was a large-capacity, dry fertilizer spreader implement used within the agricultural industry. That farm implement, which has also been referred to as a "flotation" vehicle, was utilized to spread dry chemical fertilizers, agricultural limestone and other granular products onto various types of land and growing field crops. The equipment would be a specialty-use implement, in that it was not compatible with transitioning into other agricultural usages.

The AGCO RoGator[®] was also identified by the manufacturer name of AG-Chem[®]. The RoGator[®] specialty equipment was powered by a Caterpillar[®] diesel engine, with integrated hydraulic/hydrostatic and direct-drive motor devices at each wheel.

Based on manufacturer-supplied data, the 2007 AGCO "RoGator[®]" fertilizer spreader sprayer had an overall length of approximately 25 feet, a wheelbase of about 15 feet, an overall width of approximately 12.8 feet and an overall height of approximately 12.5 to 13.5 feet. The cab and chassis weight was listed at 27,600 pounds.

The Model SS1074 farm implement included a large, beveled storage bin, manufactured by Highway Equipment Company[®] of Cedar Rapids, Iowa, for dry and granular products to be stored/carried prior to application. That bin had a 200-cubic-foot capacity storage box (Model 3020G4), and was positioned immediately behind the operator's enclosed cab (ROPS) structure. The maximum ground speed of the vehicle was identified as approximately 30 m.p.h.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-One



Figures 21 and 22 – views of an exemplar 2007 AGCO “RoGator®” with a liquid sprayer



Figures 23 and 24 – views of an exemplar 2014 AGCO “RoGator®” with a dry spreader

Safety equipment installed on the AGCO RoGator® farm implement was in place for any activities involving operating the equipment on public roads. Those safety items included front road lights, tail and brake lights, hazard warning lights, turn indicators and rear view mirrors. The manufacturer also recommended obeying all traffic safety rules and to operate the vehicle with hazard warning lights activated. According to manufacturer information contained within the owner's manual, the use of the installed, amber-colored, flashing “warning lights”, as well as turn signals, on the AGCO RoGator® implement was recommended when the implement was being driven on public roads.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-Two

During the on-site inspections, the appearance of the Highway Equipment Company® spreader/applicator from the rear was documented with photographs. That perspective has been displayed as Figure 25 below. The photograph was taken at a distance of several hundred feet behind the unit. The dry bulk bin on the rear of the farm implement measured 10 feet in width, with a bin height of approximately 5 feet.



Figure 25 – view of the rear of the AGCO RoGator® spreader/applicator bin



Figure 26 – view of the RoGator® at the accident scene

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-Three

Analysis and Reconstruction of Collision Event

The assessment and evaluation of this traffic accident utilized scientific principles and analytical procedures commonly relied upon within the field of traffic accident reconstruction and collision analysis. All background materials, supplied documentation, foundational information and physical evidence reviewed and developed with respect to this traffic accident were evaluated and analyzed through the applications and principles commonly relied upon within the field of motor vehicle collision investigation and reconstruction. The techniques and applications incorporated into the forensic analysis, assessment of the physical evidence and the reconstruction of the traffic accident, which were the basis for the findings and conclusions contained within this preliminary report, have been commonly utilized and accepted in the field of traffic collision analysis.

As previously mentioned, the operator of the farm implement, Brieson Jensen, provided information regarding his recollections of the traffic event. During sworn testimony that occurred on December 16, 2016 as a part of the litigation process, Mr. Jensen provided information which included:

- He was employed by Farmers Co-operative during the growing season of 2013.
- After studying materials and receiving training through the Co-op related to the application of chemicals in agricultural fields, he began to operate the dry spreader for customers of Farmers Co-op.
- Mr. Jensen operated the same RoGator® implement every day, and would start his day at the Farmers' Co-operative facility in Pilger.
- He received his assignments for the applicator farm implement at the beginning of the day, with those assignments including the position of the field, the application rate and a plat map of where the field was located.
- Prior to the crash event, Mr. Jensen was traveling north on Highway 57 from Highway 98, and was intending on stopping at, or near, the intersection with Road 857. At that location, he was going to wait for a loader truck to fill his product bin.
- As he traveled toward that intersection, he recalled that he was likely traveling at the speed of 24 m.p.h. with the RoGator® in fourth gear.
- He recalled that there was a hill to the south of the intersection where the accident eventually occurred, and that he traveled down that hill for about 200 yards before reaching the intersection area.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-Four

- Mr. Jensen recalled checking his mirrors, but did not see any vehicles behind his farm implement. He began to slow the implement from 24 m.p.h. to a speed that he recalled was likely slower than 8 m.p.h., and more likely about 4 to 5 m.p.h.
- He signaled his intent to turn left at the intersection, checked his rear-view mirrors again, checked the area in front of his implement and then started the process of turning at the intersection.
- As he scanned the area west of the intersection while he was approaching it, Mr. Jensen said he was determining the best way to position the farm implement in order to load the fertilizer product into the bin.
- While he was scanning the intersection area, he recalled that he likely slowed the RoGator® down even more, perhaps even possibly stopping the implement for no more than 15 seconds.
- Once he made his decision to turn toward the left, he checked his mirrors, checked the area in front of his implement checked his mirrors and then started to turn.
- As he started the turn, he recalled that a portion of his implement was likely to the right of the pavement edge. As Mr. Jensen started to move forward and got to a point that he thought was about 30% to 40% through the left turn, he then heard an air horn.
- When he heard the air horn, he looked over his left shoulder, saw a "maroon blur" and pulled back on the operating throttle of the farm implement as hard as he could.
- As a result of the collision by the truck and trailer vehicle, Mr. Jensen recalled that he was thrown around in the cab, hitting his head on one of the support posts of the cab. His farm implement had been deflected toward the north and he ended up stopping in the highway, facing north.
- After the crash, Mr. Jensen exited his farm implement, went down to the truck-trailer vehicle and assisted the two men in exiting the cab of the Kenworth®.

The operator of the Kenworth® W900 truck tractor and attached Manac® drop-deck semi-trailer, Gary Gibson, Jr., also provided information regarding his recollections of the traffic event. During sworn testimony, which occurred on December 29, 2016, Mr. Gibson provided information which included:

- Mr. Gibson received his Commercial Driver's License in approximately 1998, having taken classes at the U.S. Truck Driving School in Wheat Ridge, Colorado.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-Five

- Although he grew up in Southern Colorado, Mr. Gibson spent a few years living in Laurel, Nebraska. While in Nebraska, he worked for Deerfield Equipment in Laurel, delivering farm equipment, sprayers and agricultural machinery to customers of the business.
- During the course of his work in Nebraska, Mr. Gibson hauled grain to storage bins owned by Deerfield Farms, which were located on State Highway 57, just north of the intersection where the accident occurred. He indicated that he was familiar with the highway, having traveled on it many times.
- Mr. Gibson had also traveled on Road 857 on prior occasions, utilizing that minimum-maintenance road to deliver farm equipment to customers of Deerfield Equipment, and to perform farming activities associated with land owned by the Deerfield family.
- He also owned a business in which he provided mobile repair and maintenance services to heavy-duty vehicles, machinery and equipment while living in Laurel, Nebraska. Mr. Gibson sold that service truck and its equipment in September 2013, after the crash event.
- After moving back to Colorado from Nebraska, Mr. Gibson hired on as a truck driver with Phil Sims Trucking LLC. He was involved in moving heavy equipment with their flatbed division of the company.
- On the trip that eventually resulted in the collision with the farm implement, he had loaded some antique military equipment in Lexington, Nebraska and was headed to a destination in Minnesota.
- After traveling through Norfolk, Nebraska, Mr. Gibson made his way to Highway 98 and then turned north from that intersection onto State Highway 57. That is the last thing he remembers prior to the accident and about the accident.
- Mr. Gibson has no memory of any of the facts, circumstances, events surrounding or related to the traffic collision with the RoGator® farm implement.

There were no independent witnesses to the accident. A passenger in the Kenworth truck tractor, identified as Tristen Gibson, witnessed the accident. Tristen, who was the 14-year-old son of the truck driver Gary Gibson, Jr., recalled traveling north on Highway 57. He saw the farm implement in the highway as they came over a hill in the road. Tristen recalled the field sprayer implement was facing toward the west, with its left-front wheel on the centerline of the highway. He recalled that his dad applied the brakes of the truck in order to avoid the farm implement, but the two vehicles collided. Tristen remembered that the front passenger side of the Kenworth® collided with the front-left side of the RoGator®. After the collision with the RoGator®, the truck and trailer that he

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-Six

was riding in departed the highway, entered the ditch and collided with a group of trees. He did not know the speed of the truck prior to the time of the collision, at the time of the collision with the farm implement, nor as the truck traveled northbound on Highway 57 before his father applied the brakes of the truck when he saw the RoGator® farm implement at the intersection.

During an examination of the northbound approach to the crash location, it was determined that a line-of-sight from a large hillcrest, just north of the Nebraska State Highway 98 and 57 intersection, to the next large hillcrest at the horizon line was possible, with that distance being over one mile. Additionally, the view toward the north, to the Road 857 intersection area, was also possible. That distance to the intersection was determined to be approximately 2,975 feet, as represented within the photograph identified as Figure 27 below. The timing of northbound truck traffic traveling between that hillcrest location and the next smaller hillcrest area, just south of the intersection with Road 857, was determined to be between approximately 25 to 30 seconds.



Figure 27 – view toward the north on State Highway 57

The line-of-sight potential, from both driver/operator perspectives, would have been enhanced in this particular situation by the excessive size of the farm implement. As previously noted, the overall width of the AGCO RoGator® farm implement was in excess of 12 feet, which was wider than the northbound travel lane on State Highway 57. The AGCO RoGator® farm implement was approximately 12.5 feet in height, which would place the farm implement's vertical profile very similar to that of a box van semi-trailer. Therefore, relative to a viewing perspective above the highway surface, the RoGator®'s vertical overall height would be analogous to that of a typical box van semi-

April 3, 2017
 Mr. Randall L. Goyette
 RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
 Page Twenty-Seven

trailer's overall height. Forensic work conducted at the scene of this traffic collision, as well as within the northbound approach to the collision location, indicated that the minimal terrain elevation to the south of the intersection would not have been significant in preventing, inhibiting or delaying detection of the presence of the AGCO RoGator[®] farm implement as it progressed from the smaller hillcrest down towards the north and towards the intersection of Road 857. An example of that forensic work has been displayed within Figure 28 below.



Figure 28
 (replicated in
 Appendix B)

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-Eight



Figures 29 and 30 – photographs taken by the Sheriff Department during their investigation

Figure 29, in particular, provided some significant perspective of the grade of the hill located south of the collision intersection. Additionally, the height differential between the AGCO RoGator[®] farm equipment and the adjacent Ford[®] Crown Victoria police vehicle can be viewed.

Observations made during the on-site examinations of the location where the traffic crash occurred indicated that the magnitude of the terrain differentials associated with the hillcrest area to the immediate south of the collision location, were not so substantial that it completely prevented or substantially inhibited the visual detectability of the RoGator[®] farm implement as the large farm implement descended the northbound grade in its approach to Road 857.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Twenty-Nine



Figure 31 – compilation of photos showing southbound truck

Figure 31 illustrated the minor nature of the terrain differential just south of the intersection with Road 857. While standing on the west side of Road 857, with a camera position at just less than 6 feet above the ground, the right, outside rear-view mirror on the Class 8 straight truck can be seen for a substantial distance as the truck progresses toward the south. Figure 32, which also displayed a few images from a photographic sequence, illustrated the same minor terrain differential, relative to an approximate 6 foot camera height within the southbound lane of Highway 57.



Figure 32 – Class 8 truck backing into a driveway more than 600 feet from the intersection

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirty

In order to demonstrate and validate observations and photographic evidence related to the visual detectability of the RoGator[®] farm implement by the northbound Kenworth truck driver, research was conducted at the scene of the crash. A graduated surveyor's stadia rod, with two, distinctive-colored, standard sized (8.5" by 11") sheets of paper attached, was placed at the approximate south end of the intersection with Road 857. That stadia rod was extended to a point where the top edge of the upper sheet of colored paper was at a fixed distance of 12.5 feet above the roadway/ground surface. That 12.5 feet of height was the approximate equivalent of the minimum vertical height of the AGCO RoGator[®] SS1074 farm implement with the attached Highway Equipment Company[®] hopper bin, based upon manufacturer-supplied specifications and forensic measuring of exemplar equipment.



Figure 33 – exemplar

Documentation of the exposure of the rear profile of the farm implement could then be obtained at various identifiable locations prior to, or south of, the intersection of 857 Road with State Highway 57. That photographic documentation occurred at a height of approximately 7 feet, 2 inches above the pavement surface, which would replicate the lower end of the vertical range of driver's eye height for the Kenworth[®] W900 truck tractor. It was probable that Mr. Gibson, Jr. had a higher vertical profile when seated within the cab of his Kenworth[®] W900 truck tractor. Thus, his ability to detect, discern and identify the AGCO RoGator[®] farm implement, which was positioned to the north of him as he progressed in a northbound direction, should have been easier and more efficient. Some of the photographic documentation created during that research activity has been incorporated into this preliminary report.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirty-One

The following sequence of photographs illustrated the line-of-sight potentials of the rear structure of the AGCO RoGator[®] farm implement by the driver of the northbound Kenworth[®] W900L truck tractor.



Figure 34a – approximately 2,975 feet from intersection; arrow shows vertical marker



**Figure 34b – close-up view of same marker at 2,975 feet
with horizon line marked in yellow**

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirty-Two



Figure 35a – approximately 1,850 feet from intersection



**Figure 35b – close-up view of vertical marker
with horizon line marked in red**

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr. v. Farmers' Co-operative
Page Thirty-Two



Figure 36a – approximately 795 feet from intersection



Figure 36b – close-up view of vertical marker

As evident with Figures 35a and 35b, at a distance of between approximately 1,800 feet and 795 feet from the eventual area of impact, a substantial quantity of the rear vertical structure (as much as 4.5 feet of the overall height of 12.5 feet) of the AGCO RoGator® farm implement would have been easily detectable and recognizable as farm equipment positioned on the highway. At all points closer than approximately 795 feet, a majority of the entire rear vertical profile of the farm implement would have been detectable and identifiable. Examples of that substantial vertical distance have been displayed in the photographic evidence incorporated below.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirty-Four



Figure 37 – view of vertical pole from approximately 700 feet from intersection



Figure 38- view toward intersection from approximately 600 feet away

April 3, 2017
 Mr. Randall L. Goyette
 RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
 Page Thirty-Five

The forensic analysis of the collision also involved an assessment of the interaction between the AGCO farm implement and the Kenworth truck tractor. Photogrammetrically evaluated positioning of the two vehicles at the time of the collision, based upon numerous photographic images taken by the Wayne County Sheriff Department, placed the area of impact for this collision approximately 3.7 feet east of the west fog/lane limit line on Highway 57. That impact area would place the right-front corner of the Kenworth® W900 truck tractor striking the left front wheel of the RoGator® farm implement.



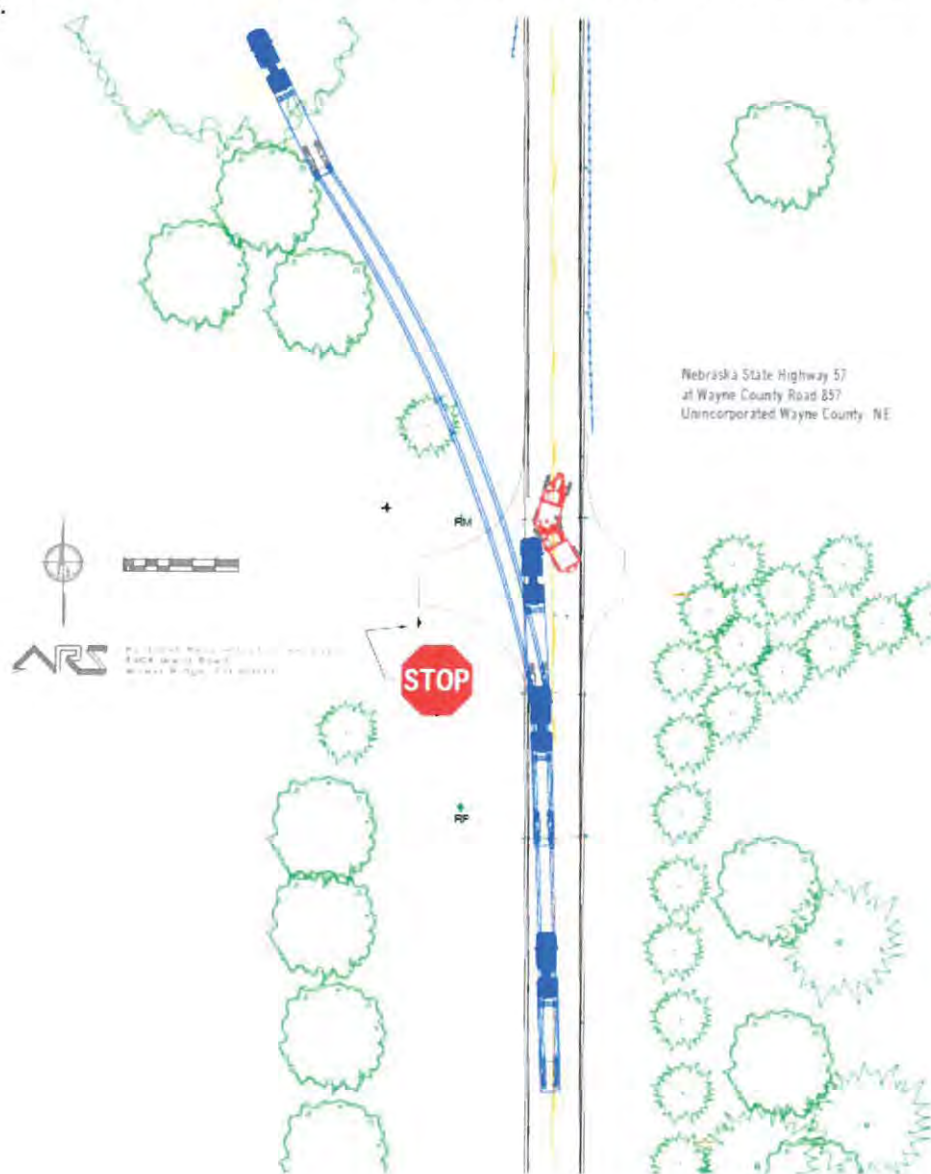
Figure 39 – area of collision

The beginning of the collision scrub mark, as well as the curvilinear tire pattern emanating from the initiating tire mark, can be viewed within Figure 39. Due to the eccentric nature of the collision interaction, the RoGator® implement underwent a counter-clockwise rotational movement toward the northeast. Other tire marks, with the distinctive dual-diagonal tractor-style print, can be easily detected. The right-rear and left-rear tire mark transfers from the RoGator®'s rear axle can be easily viewed, with their distinctive curvilinear pattern.

The diagonal movement of the dual-wheeled skid marks, evident within the left edge area of Figure 39, can also be viewed. Those tire marks were created by the right-side, dual wheels of the Kenworth® truck tractor and the Manac® step-deck semi-trailer.

April 3, 2017
 Mr. Randall L. Goyette
 RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
 Page Thirty-Six

Based upon the forensic evaluation of the law enforcement photographs, a scaled forensic diagram was created. The foundation for that diagram was forensic mapping conducted at the scene of the crash, utilizing the Leica total station measuring instrument. Measurements obtained by the investigating sheriff deputy and evidence from the photographic evidence was then incorporated into the diagram. Geometric data, obtained from satellite imagery downloaded from Google® Maps, was later integrated into the diagram to incorporate some of the perspective features that were present in the area.



April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirty-Seven

This aspect of the reconstruction and forensic analysis of the traffic collision allowed an assessment of the distances created by the discernible tire marks of the northbound truck, as well as distances related to the movement of the AGCO RoGator® farm implement as it initiated a left-turn maneuver. A time-distance-velocity evaluation was then integrated into the dynamic analysis of the collision. That analysis indicted that Mr. Gibson probably did not alter his driving as he traveled northbound on Highway 57 until he was within the downhill segment of the highway, immediately north of the intersection with Road 857. There was no physical evidence indicating that he initiated any significant slowing of the ground speed of his northbound Kenworth® W900L truck tractor and attached semi-trailer until he was in close proximity to the eventual collision. The tire “skid marks” created by the braking action of his truck tractor did not start until the front of his vehicle was within a distance of 150 feet from the eventual collision location.

Data related to factors present during this particular traffic accident were integrated into an analysis of the crash events, using the *Interactive Driver Response Research*® analysis tool. The IDRR® analysis process incorporated mathematical algorithms (multiple linear stepwise regression formulas) to determine how other drivers, faced with a similar or analogous situation, have responded. That research was based upon results from over 160 research studies published worldwide that incorporated over 10,000 scientific experiment results related to human responses when driving. In addition, video frame analysis of several hundred “real world” emergency responses (crash events) were integrated into that research and traffic accident analysis process, which has been peer-reviewed in numerous academic and scientific-related venues.

As a result of the substantial number of published, scientific research treatises integrated into that analysis tool, the IDRR® program provided an estimate of driver response times to commonly encountered traffic events with relative accuracy and scientific validity. The process was utilized to evaluate the driving response that would be analogous to that of the driver of the Kenworth® W900 truck tractor, Mr. Gibson. Based upon our forensic analysis, it was determined that an “average” perception-response time interval to the lead vehicle situation would have been approximately 1.1 to 1.2 seconds. The range of the 85th percentile time interval response to a “lead vehicle” was approximately 1.5 seconds.

Given that the AGCO RoGator® farm implement could have been detected at a distance in excess of 800 feet, it can be determined that there would have been in excess of 600

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirty-Eight

feet available to Mr. Gibson in which he could have initiated a safe and controlled slowing of his vehicle to the presence of the farm implement within his lane of travel. Calculations related to the movement of Mr. Gibson's commercial motor vehicle indicated that it would likely have taken that vehicle a minimum distance within the range of 275 to 500 feet to come to a safe and controlled stop on the highway. Even if he had not chosen to completely stop his vehicle within the northbound lane of travel, Mr. Gibson could have slowed his vehicle to a point where it would have been safer to initiate an overtaking maneuver after clearing the intersection. Statutes in Nebraska and in Colorado prohibit the overtaking/passing of another vehicle on a two-lane highway within an intersection.

The study and foundation of basic skills related to and involved with the driving task has often been referred to as "human factors" within the field of traffic accident reconstruction. It has also been referenced as the "human element" when applied to the operation of a motor vehicle or specialized equipment within a highway environment. The driving maneuvers and minimum-level skill capabilities demonstrated by the operator of the Kenworth® W900L truck tractor and attached Manac® step-deck, twin-axle semi-trailer were compared to published guidelines for drivers of all types of vehicles. Those quantifiable and identifiable driving skills for basic drivers, developed from guidelines resulting from published scientific research by the American Association of Motor Vehicle Administrators, establish a level of minimum competency for vehicle drivers, as well as equipment operators within a highway environment, in all three of the following categories:

- Perceptual: The ability to interpret the traffic environment in a way that permits proper and safe vehicle operation (Seeing and knowing what to do).
- Perceptual – Motor: The ability to couple driving responses with traffic stimuli (Seeing and knowing what to do, and then doing it)
- Attention Sharing: The ability to carry out two or more performances simultaneously (Steer, control speed, and watch).

The "Commercial Driver's License" manual for both Colorado and Nebraska, for example, incorporated those general guidelines when identifying accepted or recommended general practices for drivers and equipment operators on a public highway. Those practices would include adjusting the vehicle's movement, directionality or speed to different traffic situations, such as identifying trouble areas while driving, following at safe distances, entering highways from a stop, speed and space

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Thirty-Nine

management within differing highway situations or conditions, changing direction and other commonly-encountered rural driving situations.

The human factors analysis supported a conclusion that potential and/or substantial hazards within the highway travel lanes, such as the northbound farm implement, should be detectable as a potential hazard or immediate hazard within environmental situations analogous to the accident situation in this case. As vehicle operators traverse locations where those potential hazards exist, such as rural highways in high activity agricultural regions during the summer growing season, a driver's ability to detect, discern and recognize potential hazard(s) while approaching those locations at various speeds would be enhanced by the rural nature of the surroundings, his knowledge of the area based upon previous travel on that roadway and on the intersecting local road (Road 857), the physical size of the farm implement (leading vehicle), the color/visual contrast of the leading vehicle, the overall appearance of the leading vehicle and the substantial natural ambient lighting. Additional factors would include the available warning lights/turn signals/brake lights displayed on the farm implement, the magnitude of the conspicuity, the anticipation of the hazardous object or situation, the strength of the visual stimulus, the eccentricity of the hazard, the size of the hazardous object or situation, the pattern of the hazardous object or situation, and the immediacy of the hazardous object or situation.

In this case, it was concluded that Mr. Gibson, probably did not discern or detect the presence of the AGCO RoGator[®] farm implement in a timely manner. Due to his delayed detection/identification and subsequent response, he was not able to reduce his vehicle's speed in a safe and controlled manner, and adjust his driving response/approach, while in control of his vehicle, within the area where the slow-moving AGCO RoGator[®] farm implement was traveling. The available physical evidence indicated that Mr. Gibson's response occurred in an uncontrolled and hazardous manner, as evidenced by the impact between the commercial motor vehicle and the left-turning farm equipment and by the extensive skidding of his vehicle prior to, and subsequent to, the impact with the farm implement. The physical evidence also indicated that the aggressive braking and swerving response of the commercial motor vehicle occurred at a point when the vehicle was within approximately 250 feet of the eventual collision location. The lack of any detection, recognition or operational adjustment to the slow-moving farm implement was strongly indicative of Mr. Gibson's failure to implement basic, minimum competency driving skills that could have easily avoided a collision with a slower-moving farm implement.

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Forty

A review of Mr. Sokol's written report of February 1, 2017 indicated that it was thorough in his explanation of the vehicle dynamics related to the collision between the commercial motor vehicle and the farm implement. However, Mr. Sokol surmised that the driving actions of Mr. Gibson were apparently acceptable and safe, as a *"prudent driver traveling northbound would begin the process of moving into the southbound traffic so that one could safely pass the RoGator"*. Mr. Sokol further opined that, *"Mr. Gibson was forced to travel to the left of the RoGator in order to continue traveling northbound and avoid an impact with the RoGator within the northbound traffic lane"*. Such conclusions lack an application of safe driving techniques, as established by state traffic statutes and safe driving recommendations/guidelines as contained with state driving manuals. For example, safe driving recommendations for commercial motor vehicle operators indicate that truck drivers should scan ahead for identifying and evaluating traffic conditions/situations for a distance their vehicle will cover in 12 to 15 seconds. At a speed of approximately 60 m.p.h., that distance would be within the approximate range of 1,050 feet to 1,300 feet.

Mr. Sokol failed to indicate that Mr. Jensen was legally entitled to operate the AGCO RoGator® farm implement on the highway, that Mr. Jensen was entitled to make a left turn from a state highway onto Road 857, that Mr. Jensen was still within the intersection area as indicated by the pavement geometry at the intersection and that Mr. Jensen had been signaling for a left-turn maneuver prior to initiating his turn. Mr. Jensen also was entitled to make a left turn at a speed that was safe and in control for his farm implement.

Mr. Sokol also failed to acknowledge that Mr. Gibson was familiar with that state highway, that he had traveled on that segment of Highway 57 many times, that he was familiar with the presence of the intersection with Road 857, that he was familiar with the appearance of farm equipment, and that he was familiar with the usage of farm equipment in this particular area of Wayne County. Mr. Sokol failed to acknowledge that Mr. Gibson had the opportunity and ability to discern and detect the presence of the farm implement in the area to the south of the hillcrest located south of the intersection. That additional viewing distance would have allowed Mr. Gibson additional time to adjust his driving approach in a safe and controlled manner, accommodating the lawful usage to the highway to another vehicle operator. All those factors were consistent with a conclusion that Mr. Gibson was inattentive to the driving task and inattentive to the existing traffic situation presented to him as he traveled toward the north. The proper

April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Forty-One

conduct of a driver would be to reduce the level of risk when driving, by making reasonable and safe adjustments in the vehicle's operation.

Summary

We were asked to review provided materials and develop information, data and physical evidence, and then complete an initial collision reconstruction and forensic analysis of a motor vehicle traffic accident that occurred on June 26, 2013, at the intersection of Nebraska State Highway 57 with County Road 857, in a rural portion of Wayne County, Nebraska. The traffic event involved a 2006 Kenworth W900L truck tractor and attached Manac drop-deck semi-trailer, operated by Gary Gibson, Jr., and a 2007 AGCO "RoGator®" self-propelled fertilizer spreader, operated by Briesen Jensen.

Based upon the information and data reviewed, developed, considered and analyzed, several findings and conclusions related to the traffic accident have been identified within this report. A summary of those findings indicate that Mr. Gibson had an obligation to operate his commercial motor vehicle in a safe manner while traveling on a public highway. He failed to discern and detect, in a timely manner, a large farm implement traveling on the same highway, but at a much slower speed, and failed to maintain control of his vehicle while the farm implement was making a left turn at an intersection and while Mr. Gibson was proceeding through that same intersection.

Should additional information, physical evidence or other materials become available with respect to this collision, the findings and opinions expressed in this initial summary report may be altered, depending on the nature of the information and on an evaluation of that data.



Arnold G. Wheat
Accident Reconstruction Specialist
Accreditation Commission for Traffic Accident Reconstruction
Registration #226



34005



David W. Lohf
Accident Reconstruction Specialist
Accreditation Commission for Traffic Accident Reconstruction
Registration #1081



April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Forty-Two

Appendix A – General References

Bosch, Robert; Automotive Handbook, 2nd Ed.; Society of Automotive Engineers, Warrendale, PA; 1986

Brach, Raymond and Brach, R. Matthew; Vehicle Accident Analysis and Reconstruction Methods; SAE International, Warrendale, PA; 2005

Daily, John, Shigemura, Nathan and Daily, Jeremy; Fundamentals of Traffic Crash Reconstruction, Vol. 2; Institute of Police Technology and Management; 2006

Daily, John and Shigemura, Nathan; Fundamentals of Applied Physics for Traffic Accident Investigation; Institute of Police Technology and Management; 1997

Fricke, Lynn and J. Stannard Baker; Traffic Accident Reconstruction, Volume II; Northwestern University Traffic Institute, Evanston, IL; 1990

Fricke, Lynn B.; Traffic Crash Reconstruction; Northwestern University Center for Public Safety, Evanston, IL; 2010

Navin, Francis P., PhD; “*The Coefficient of Friction, Definition and Models*”; CATAIR-TAARS-SOAR-WATAI Conference; Kelowna, B.C.; 1992

Noy, Y. Ian, et.al.; Handbook of Human Factors in Litigation; CRC Press, Canada, 2004

Siddel, Donald E. and Day, Terry D.; “Updating the Vehicle Class Categories”; 960897; Society of Automotive Engineers, Warrendale, PA 1996

Stutts, J. C., et. Al.; “*The Role of Driver Distraction in Traffic Crashes*”; AAA Foundation for Traffic Safety; Washington, D.C., 2001

U.S. Department of Transportation, Federal Highway Administration; Manual on Uniform Traffic Control Devices for Streets and Highways; Washington, D.C.; 2009

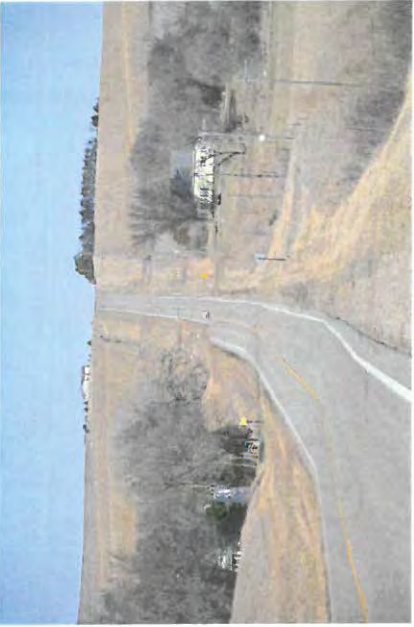
U.S. Geological Survey; U.S. Department of Interior

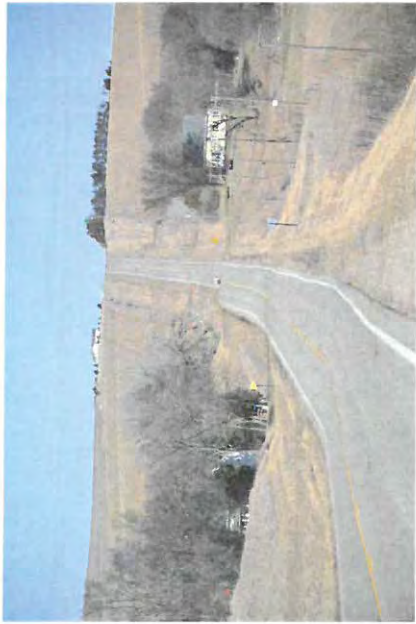
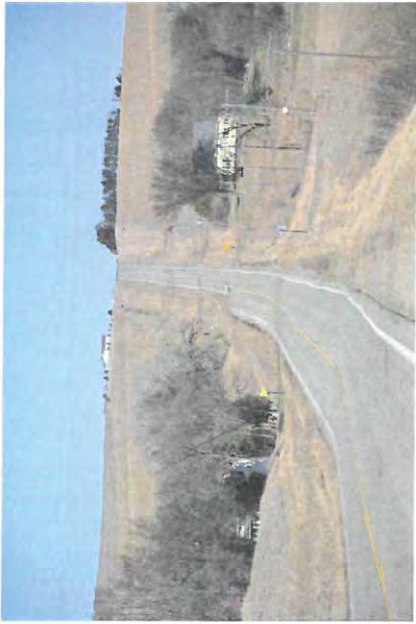
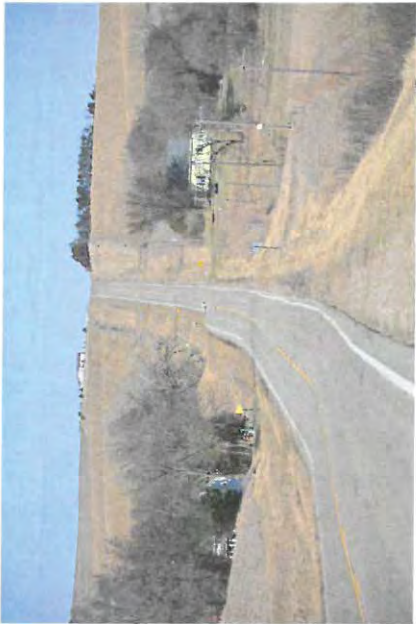
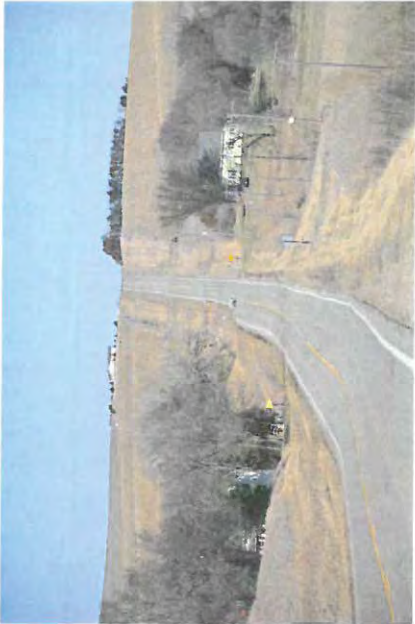
Woodsen, et al.; Human Factors Design Handbook; McGraw-Hill Publishing; New York; 1992

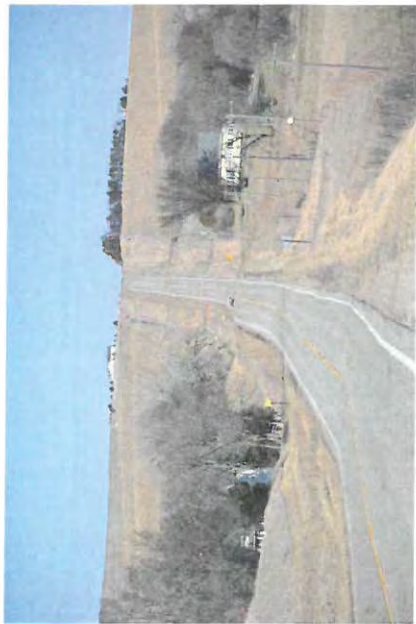
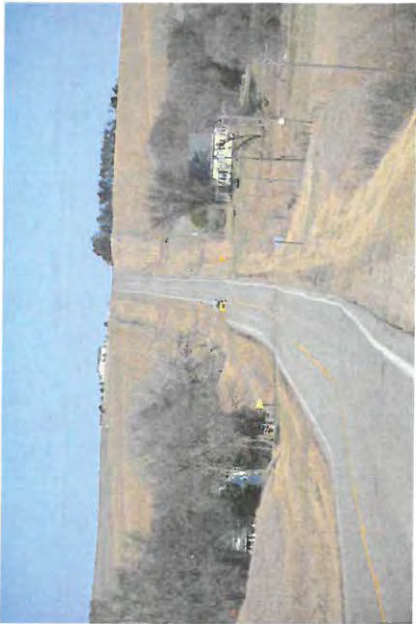
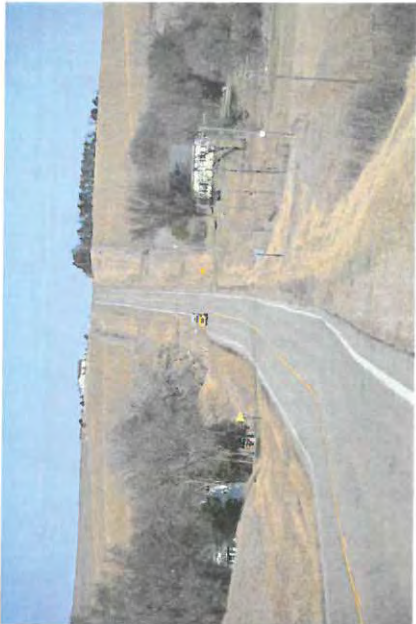
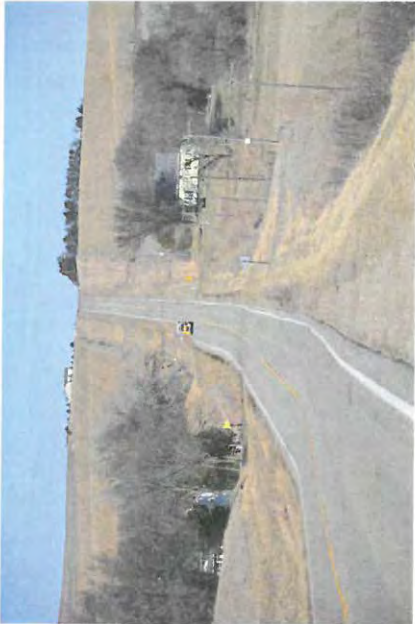
April 3, 2017
Mr. Randall L. Goyette
RE: Gary Gibson, Jr., et al. v. Farmers' Co-operative
Page Forty-Three

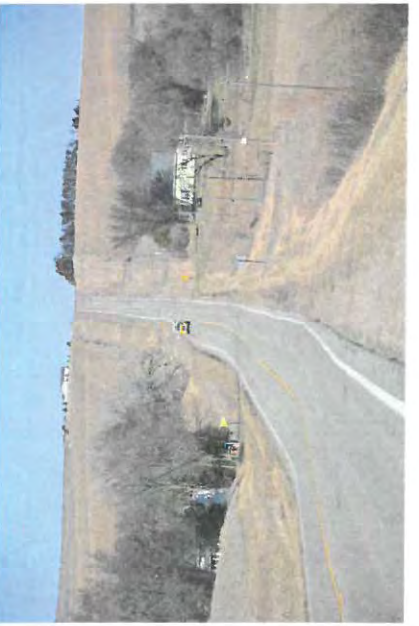
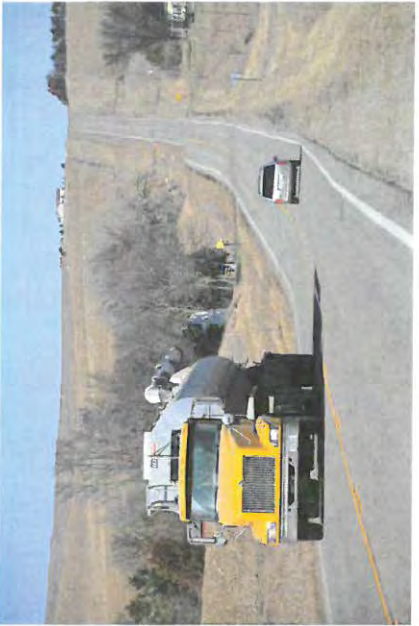
Appendix B – Scene Photographs

The following four pages (Pages 44 thru 47) duplicate Figure 28 within the report and provide an enlarged view of the line-of-sight that was discussed.









ACCIDENT RECONSTRUCTION SERVICES, INC.

Collision Analysis and Traffic Accident Reconstruction

4964 WARD ROAD ° WHEAT RIDGE, CO 80033 ° 303-403-9045 ° FAX 303-403-9401 ° ars@crashlogistics.com

CURRICULUM VITAE

Arnold G. Wheat

Traffic Accident Reconstruction Specialist; ACTAR Registration No. 226

EXPERIENCE

1983 – Present	Accident Reconstruction Services, Inc. Reconstruction Specialist; Forensic Analyst
1975 – 1987	Arvada Police Department, Arvada, Colorado Accident Reconstruction Specialist (1979–1983)
1972 – 1975	State of New York; Buffalo, New York Police Officer and Criminal Investigator

SPECIALIZED TRAINING

Specialized Training has been obtained in the following general subject areas since 1977

Automotive Collision Estimating Vehicle Damage Evaluation
Automotive Engineering and Design
Automotive Mechanics Vehicle Operating Systems
Biomechanics and Human Tolerance relating to Vehicle Crashes
Biomechanics of Impact Trauma Injury Cause Analysis Occupant Kinematics
Commercial Vehicle Accident Investigation and Reconstruction
Commercial Vehicle Brake Systems
Commercial Vehicle Safety Inspections Commercial Vehicle Post-crash Inspections
Computer Applications in Traffic Accident Reconstruction
Crash Scene Forensic Mapping with Theodolites and Total Station
Driver Safety Driver Distractions Driver Fatigue Traffic Safety
Forensic Photography Photogrammetry Techniques and Evaluation
Forensic Physics and Applied Physics in Accident Reconstruction
Highway Engineering Pavement Surface Treatments Pavement Surface Friction
Highway Work Zone Design and Site Supervision Incident Management on Highways
Human Factors related to Vehicle Operation Driver Perception, Reaction, Response
Investigation of Pedestrian- and Bicycle-Involved Traffic Crashes
Low Speed Rear–end Impacts and Contacts Traffic Accident Fraud Investigation
Motorcycle Accident Investigation and Reconstruction
Road Safety Audits Highway Safety Analysis
Rotational Mechanics Developed from Newton's Laws and Point Mass Mechanics
Seat Belt and Air Bag Restraint Systems ECM–SDM–OBC Vehicle Components
Technical Accident Investigation Commercial Motor Vehicle Dynamics
Technical Truck Accident Investigation
Tire Forensics Tire Failure Analysis
Traffic Accident Reconstruction Traffic Crash Cause Analysis
Traffic Engineering Traffic Signal Operation MUTCD Applications to Crash Reconstruction
U.S. DOT Commercial Vehicle Driver and Vehicle Inspection
Vehicle Dynamics Rollover Dynamics

CURRICULUM VITAE
Arnold G. Wheat
Page Two

EDUCATION

1990 – 1991	Classes in Civil Engineering Metropolitan State College, Denver, Colorado
1972 – 1974	Bachelor of Science Degree, Major in Criminal Justice State University of New York, Buffalo, New York
1970 – 1972	Associate in Applied Sciences Degree, Major in Police Sciences Erie County Technical Institute, Buffalo, New York

COURT EXPERIENCE

United States District Courts, Colorado Division
United States District Court, Wyoming Division
First Judicial District, Jefferson County District Court, Colorado
Second Judicial District, Denver County District Court, Colorado
Fourth Judicial District, El Paso County District Court, Colorado
Fourth Judicial District, Teller County District Court, Colorado
Fifth Judicial District, Eagle County District Court, Colorado
Sixth Judicial District, LaPlata County District Court, Colorado
Seventh Judicial District, Gunnison County District Court, Colorado
Eighth Judicial District, Larimer County District Court, Colorado
Ninth Judicial District, Rio Blanco District Court, Colorado
Tenth Judicial District, Pueblo County District Court, Colorado
Twelfth Judicial District, Conejos County District Court, Colorado
Twelfth Judicial District, Saguache County District Court, Colorado
Thirteenth Judicial District, Morgan County District Court, Colorado
Thirteenth Judicial District, Washington County District Court, Colorado
Fourteenth Judicial District, Moffat County District Court, Colorado
Fourteenth Judicial District, Routt County District Court, Colorado
Fifteenth Judicial District, Prowers County District Court, Colorado
Sixteenth Judicial District, LaJunta County, Colorado
Seventeenth Judicial District, Adams County District Court, Colorado
Eighteenth Judicial District, Arapahoe County District Court, Colorado
Eighteenth Judicial District, Douglas County District Court, Colorado
Nineteenth Judicial District, Weld County District Court, Colorado
Twentieth Judicial District, Boulder County District Court, Colorado
Twenty–First Judicial District, Mesa County District Court, Colorado
Office of Administrative Courts, State of Colorado
Sixth Judicial Circuit Court, Pasco County, Florida
Seventh Judicial Circuit Court, St Johns County, Florida
District Court, Maui County, Hawaii
Third Judicial District, Owyhee County, Idaho
Fifteenth Judicial District, Thomas County, Kansas
Fort Peck Tribal Court, Montana
Tenth Judicial District, Fergus County, Montana
Thirteenth Judicial District, Yellowstone County, Montana
Nineteenth Judicial District, Lincoln County District Court, Montana
District Court, Kearney County, Nebraska

CURRICULUM VITAE

Arnold G. Wheat

Page Three

COURT EXPERIENCE, cont'd

District Court, Keith County, Nebraska

District Court, Scotts Bluff County, Nebraska

Seventh Judicial Circuit, Pennington County, South Dakota

District Court, Shelby County, Tennessee

First Judicial District, Laramie County, Wyoming

Fifth Judicial District, Washakie County, Wyoming

Ninth Judicial District, Fremont County, Wyoming

MEMBERSHIPS AND ASSOCIATIONS

Accreditation Commission for Traffic Accident Reconstruction, Past Chairman

American Society of Safety Engineers

American Trucking Association, Competition Official (1989 – 2001), NTDC

American Trucking Association, Safety Management Council

Colorado Motor Carrier's Association, Safety Management Council

Commercial Vehicle Safety Alliance:

Challenge Competition Official (2002 – 2005, 2015-2016)

National Safety Council

North American Transportation Management Institute, Adjunct Faculty

Professional Society of Forensic Mapping

Roads Scholar Recipient, COTIP, Colorado State University

Society of Accident Reconstructionists:

Chairman 1986–1992 and 2004–present Secretary/Treasurer 1993–2003

Society of Automotive Engineers:

Standards Development Committee – Accident Investigation and Reconstruction Practices

Technical Paper Peer Review Committee – Accident Investigation and Reconstruction Practices

Southwestern Association of Technical Accident Investigators

Committee member for *"Minimum Training Criteria for Police Traffic Accident Reconstructionists"*

U.S. Department of Transportation, National Highway Traffic Safety Administration
Contract DTNH22–85–C–05120

Texas Association of Accident Reconstruction Specialists

Washington Association of Technical Accident Investigators

World Reconstruction Exposition (WREX) WREX2000® and WREX2016® – Executive Committees, Conference Staff

PROFESSIONAL PRESENTATIONS AND TEACHING EXPERIENCE

American Trucking Association, Motor Fleet Supervisors Annual Conferences; Central United States Region and Western United States Region

American Trucking Association; Western Regional Safety Rendezvous– Wyoming, Colorado

Arkansas Trucking Association

Arvada Police Department – Training Academy and FTO Program

California Trucking Association

CURRICULUM VITAE

Arnold G. Wheat

Page Four

PROFESSIONAL PRESENTATIONS AND TEACHING EXPERIENCE, cont'd

Colorado District Attorney's Council

Colorado Law Enforcement Training Academy – Basic, Technical, and Truck Accident Investigation

Colorado Motor Carrier's Association

Consolidated Edison Company of New York

Food Distributors International

Hawaiian Bar Association, Lihue, Hawaii

IPTM, University of North Florida, Jacksonville, Florida

Iowa Motor Truck Association

Jefferson County, Colorado Patrol Commander's Association

Kansas Motor Carrier Association

Maine Motor Transport Association

National Private Truck Council

New York State Motor Truck Association

New York Times, Transportation Department

Rocky Mountain Institute of Transportation Safety– Colorado State University

Seattle University, Division of Continuing Education

Society of Accident Reconstructionists

Southwestern Association of Technical Accident Investigators

Tennessee Trucking Association

US DOT, Federal Motor Carrier Safety Administration; CAPE Seminars Colorado, Wyoming

Utah Motor Transport Association

TECHNICAL RESOURCE FOR NATIONAL MEDIA

Accident Reconstruction News; Vol. 7 No. 9; September 2005; "Portable Crash Scene Mapping Tools Prove Quick, Accurate, Economical"

CBS News – *48 Hours*; April 4, 2015; "An Accidental Husband" investigative report

Colorado Public Radio; March 4, 2014; *Colorado Matters*; "Pile-up on I-25 in Denver Causes Investigative Headaches"

Road & Track; July 9, 2013; "Anatomy of a High-Speed Crash"

Traffic Safety; National Safety Council; January/February 1994; "How to Keep Your Eyes on the Road"

Trucking News; September 2007; "Anatomy of an Accident"

CURRICULUM VITAE
Arnold G. Wheat
Page Five

PUBLICATIONS

"Accident Experience – Are New Entrant Motor Carriers Dangerous?"; *The SOARce*, Autumn 2000; Society of Accident Reconstructionists
Accident Investigation Manual; ISBN 1-4018-6939-4; Delmar-Thompson Publishing Company, New York; 2004
Advanced Motor Fleet Accident Investigation; NATMI Training Manual; 2003; co-author;
"Application of the Clear Zone to Traffic Accident Reconstruction"; *The SOARce*, Spring 1999; Society of Accident Reconstructionists
Co-Editor, *The SOARce* Magazine
"Collision Analysis of Unique Roadways"; *The SOARce*, Winter 1997; Society of Accident Reconstructionists
"Determination of Coefficients of Friction during Adverse Wintertime Highway Conditions"; Washington Association of Technical Accident Investigators/Society of Accident Reconstructionists Conference; July 1989; Seattle, Washington;
"Did I Get Everything? Techniques, Tools and Tips to Improve the Quality of Your Highway Accident Investigations"; National Private Truck Council; April 2002; Austin, Texas
"Documenting Vehicle Interiors in Post Crash Investigations"; Accident Reconstruction Journal; Vol 26, No. 4; July/August 2016; Waldorf, MD and WREX 2016, Orlando, FL
"Effective Techniques to Document Highway Accidents"; Rocky Mountain Regional Safety Rendezvous, July, 2003; Breckenridge, Colorado
"Incident Management Concerns for the Traffic Collision Investigator & Reconstructionist"; 2001 – *A Collision Odyssey Conference*; October 2001; Concord, California
"Integrating Traffic Accident Investigation Techniques as a Tool Within a Risk Management Plan for Public Agencies"; IMSA Journal; New York; March 2012
"Investigation and Reconstruction of Commercial Motor Vehicle Crashes"; Rocky Mountain Motor Vehicle Crash Reconstruction Conference; RMITS-Colorado State University; June 2000; Denver, Colorado
"Investigation of Highway Construction-Work Zone Traffic Accidents"; Society of Accident Reconstructionists/Texas Association of Accident Reconstruction Specialists Annual Conference; October 1991; Orlando, Florida
"Investigation of Highway Crashes Involving Commercial Motor Vehicles"; *Size Matters for Safe Driving* traffic safety task force; Colorado Department of Transportation and Colorado Motor Carrier Association; August 2005
"Investigative Considerations for Work Zone Traffic Accidents"; Southwestern Association of Technical Accident Investigators; November 1994; Reno, Nevada
"Is a Protocol for Measuring Aged Retroreflective Sheeting Warranted?"; co-author; Transportation Research Board Publication 17-06767; January 2017
"Is Your Vehicle Spec Program Adversely Affecting Your Safety Program?"; Motor Fleet Monthly; NATMI; October 2011
Motor Fleet Traffic Accident Investigation; NATMI Training Manual; 2003; co-author;
"Overview of Accident Investigation"; Rocky Mountain Regional Safety Rendezvous, July, 2008; Steamboat Springs, Colorado
"Qualifications of the Reconstructionist: Differing Points of View"; SAE-Society of Automotive Engineers, Publication #941053; March 1994; Detroit, Michigan
"Reconstruction of Accidents on Unimproved Roads"; *The SOARce*, Spring 1996; Society of Accident Reconstructionists

CURRICULUM VITAE

Arnold G. Wheat

Page Six

PUBLICATIONS, continued

"Reconstruction of Traffic Accidents Involving Visibility Issues"; *The SOARce*, Autumn 1999; Society of Accident Reconstructionists

"Rural Road Safety"; *The SOARce*, Winter 2000; Society of Accident Reconstructionists

"Techniques Using the Total Station and other Electronic Measuring Instruments"; *2001 – A Collision Odyssey Conference*; October 2001; Concord, California

"The Documentation of Vehicle Interiors during Post-Crash Investigations"; WREX2016 - IFT Presentation; World Reconstruction Exposition, Orlando, FL; May, 2016

"Use of Black Boxes in Highway & Off-Road Vehicle Crashes"; Rocky Mountain Oil & Gas EHS Group; July, 2008; Denver, CO

"Vehicle Data Resources; Society of Accident Reconstructionists Annual Conference; August 1995; Charlottesville, Virginia

"What's In Your Accident Investigation Toolbox?"; *Motor Fleet Monthly*; NATMI; July 2002

ACCIDENT RECONSTRUCTION SERVICES, INC.

Collision Analysis and Traffic Accident Reconstruction

4964 WARD ROAD ° WHEAT RIDGE, CO 80033 ° 303-403-9045 ° FAX 303-403-9401 ° ars@crashlogistics.com

CURRICULUM VITAE

David W. Lohf

Accident Reconstruction Specialist; ACTAR Registration No. 1081

EXPERIENCE

1998 – Present Accident Reconstruction Services, Inc.
Reconstruction Specialist

1976 – 1998 Colorado State Patrol; Accident Reconstruction Specialist responsible for serious injury and fatal accidents including on–scene and follow–up investigations; supervision of subordinate personnel; supervision of technical follow–up tasks; preparation of technical and reconstruction reports; presentation of expert testimony; training and instruction in traffic accident investigation; supervised curricula for basic and advanced training in accident investigation within the Colorado State Patrol and for outside agencies.

Advanced in rank from Patrolman to Captain. Retired at rank of Captain.

SPECIALIZED TRAINING

Specialized Training has been obtained in the following general areas since 1977

Accident Investigation and Reconstruction Advanced Accident Training
Advanced Concepts in Forensic Mapping
Air Brake Systems Inspection, Maintenance, and Operation Heavy Vehicle Brake Systems
AutoCAD Advanced Techniques
Commercial Vehicle Drug Interaction
C/P/X Mapping and Documentation Forensic Mapping
Crush Energy Analysis in Collision Reconstruction
Day/Night Visibility Investigation for Traffic Accident Investigators
Forensic Physics
Heavy Vehicle Braking and Rollover
High Performance Vehicle Driving
Motorcycle Operation Motorcycle Crash Investigation
On–Scene Accident Investigation
PC-CRASH and PC-RCT Training
Rollover Accident Investigation
Rotational Mechanics Developed from Newton's Laws Point Mass Mechanics
Supervision of Police Personnel
Technical Accident Investigation
Technical Truck Accident Investigation
Traffic Accident Reconstruction Reconstruction Applications Using Excel
Traffic Control Supervisor MUTCD Work Zone Planning
Use of Microcomputers in Accident Reconstruction
VASCAR Instruction
Vehicular Homicide Investigation

CURRICULUM VITAE

David W. Lohf

Page Two

EDUCATION

1977	Community College of Denver, Colorado Police Sciences
1973 – 1976	Metropolitan State College, Denver, Colorado Land Use Studies
1971 – 1973	University of Colorado, Denver, Colorado Geology
1969 – 1971	Metropolitan State College, Denver, Colorado Political Sciences

COURT EXPERIENCE

First Judicial District, Jefferson County District Court, Colorado
First Judicial District, Gilpin County District Court, Colorado
Second Judicial District, Denver County District Court, Colorado
Eleventh Judicial District, Park County District Court, Colorado
Eleventh Judicial District, Chaffee County District Court, Colorado
Eleventh Judicial District, Fremont County District Court, Colorado
Twentieth Judicial District, Boulder County District Court, Colorado
Fourth Judicial District, San Miguel County District Court, New Mexico

MEMBERSHIPS AND ASSOCIATIONS

Accreditation Commission for Traffic Accident Reconstruction
Professional Society of Forensic Mapping
Society of Accident Reconstructionists, Chairman 1998–2003
Southwestern Association of Technical Accident Investigators

PUBLICATIONS

Advanced Motor Fleet Accident Investigation; NATMI Training Manual; 2003; co–author
Motor Fleet Traffic Accident Investigation; NATMI Training Manual; 2003; co–author

SPEAKING AND TEACHING EXPERIENCE

Colorado Law Enforcement Training Academy – Basic, Technical and Technical
Truck Accident Investigation
Colorado State Patrol Training Academy
Jefferson County Patrol Commander's Association
North American Transportation Management Institute

ACCIDENT RECONSTRUCTION SERVICES, INC.

Collision Analysis and Traffic Accident Reconstruction

4964 Ward Road ° Wheat Ridge, CO 80033 ° 303-403-9045 ° FAX 303-403-9401 ° ars@crashlogistics.com

Professional Fee Schedule

<u>In-Office/Initial Case Assessment</u> (no report preparation)	\$ 750.00/case
<u>Reconstructionist Activity</u>	\$ 225.00/hour
<u>Technician Activity</u>	\$ 125.00/hour
<u>Administrative / Clerical Activity</u>	\$ 40.00/hour
<u>Expert Witness Preparation of Written Report</u>	\$ 225.00/hour
<u>Expert Witness Testimony - Hearings or Trials</u>	\$ 225.00/hour
<u>Expert Witness Testimony - Depositions</u>	\$ 675.00 minimum

Pre-payment required for the first hour of deposition testimony, which includes roundtrip travel and deposition review. Additional deposition charges will be invoiced at \$225/hour.

Terms of Business Agreement

Your business is important to us, and we want you to be aware of our operating procedures. Accident Reconstruction Services, Inc. (hereafter referred to as ARS, Inc.) will provide consultation, technical analysis, reconstruction and/or accident investigative activities, based upon the experience, training and skills of its officers, employees and/or agents and will provide independent findings, regardless of whether any findings are consistent with any interests of you, the Client. All information obtained during the consultation and reconstruction will be held in confidence.

ARS, Inc. will assess hourly charges to you, the Client, on a portal-to-portal, per person basis, for all case activities deemed by us to complete the case assignment. Hourly charges are based upon the time spent on those case activities related to the review of materials, field/office research, field investigations, technical analysis and evaluation of your case file. Costs associated with the use of data reports, research materials, as well as specialized technical or safety equipment, will be charged to the Client. Travel expenses such as mileage, tolls, parking, airfare, rental car, meals and lodging will also be charged to the Client. Additionally, Clients will be invoiced for expenses related to any document reproduction or printing costs, photograph costs, purchase of police or other data reports and other necessary expenses incurred during the course of a collision reconstruction-analysis, the preparation of written report(s) and/or in the preparation for criminal trial, civil litigation or administrative hearings.

New clients may be required to submit a retainer of up to \$2,500 before the initiation of any work. All invoice charges are based upon the time spent on the case activities and will be billed at 0.1 hour increments. All accounts are invoiced monthly, or at appropriate intervals, for services rendered during the preceding month. Payment of all invoices is due upon the receipt of the invoice. **Invoices 30 days past due will accrue interest at 1.5% per month (18% per annum). ARS, Inc. reserves the right to discontinue further work on any case activities of the Client if invoiced balances are not paid within 60 days from the date of the invoice.**

In the event it becomes necessary for ARS, Inc. to retain legal representation to enforce the collection of any sums due from you, as the Client, you agree to pay all reasonable attorney fees incurred by ARS, Inc., including court/arbitration fees, in the collection of the outstanding balances due and owed. This Professional Fee Schedule & Terms of Business Agreement is governed by the laws of the State of Colorado. In the event of any legal proceeding or hearing arising out of, or to enforce, the terms and conditions of this Fee Schedule & Terms of Business Agreement, the jurisdiction and venue shall be in Jefferson County, Colorado.

Arnold G. Wheat Expert Testimony

2011

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
Preston Fisher v. Alert Traffic Control, Inc.	LaPlata County District Court	CO	10 CV 179	05/03/11	02/22/11
Bridget Bell v. Ashley D. May	Adams County District Court	CO	09 CV 1635	03/22/11	
Ross v. Buehler Moving & Storage, et al.	Adams County District Court	CO	10 CV 179	05/26/11	
People v. Larry D. Smith	Kearney County District Court	NE	CV 10 160	10/27/11	
People v. Nicholas Peroulis	Moffatt County District Court	CO	11 T 31	12/01/11	

2012

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
People v. Ernest Ford	Saguache County District Court	CO	2011-M-96	02/10/12	
Ross v. Buehler Moving & Storage	Adams County District Court	CO	10 CV 179	04/04/12	
Jaimie Goldstein v. Megan Choun	Weld County District Court	CO	2011-CV--10		08/24/12
People v. Kory MacFarland	Gilpin County District Court	CO	2012-R-000115	12/17/12	
Estate of Pickering v. Mergenthaler Transfer	U.S. District Court, Wyoming	WY	11-CV-0350		12/20/12

2013

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
Iseka Estate, et al. v. Galitz, et al.	Boulder County District Court	CO	2012-CV-19		05/09/13
Kemmling v. State Farm Insurance	Arapahoe County District Court	CO	12-CV-2350		09/10/13

2014

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
Thompson v. Stoll and Empire Hay, Inc.	Dawson County District Court	NE	CI 13-0017		01/30/14
Kicklighter v. Feeney Xpress Transport, et al.	U.S. District Court	NE	8:13-CV-00287		09/30/14
Eileen Clark v. Kenneth Goldstein	Denver District Court	CO	13-CV-35074	10/15/14	

2015

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
Flores v. C.P.S. and Agrium U.S.	Denver County District Court	CO	2014-CV-31585		06/10/15
Condado-Perez v. Ring Power, et al.	Pasco County District Court	FL	2013CA002259CAAX	11/19/15	
Borges v. Rogers, et al.	El Paso County District Court	CO	14-CV-034051		12/03/15

2016

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
Zvunca, et al. v. Motor Coach Industries, et al.	Cook County Circuit Court	IL	07L3391		01/05/16
Mier v. Sandoval	Weld County District Court	CO	14-CV-30794	01/14/16	
Tilman Carty, et al. v. Scheepstra Trucking, et al.	U.S. District Court	WY	15CV65KHR	05/26/16	03/17/16
People v. Bruce Beckham	Adams County Court	CO	15-T-10245	06/08/16	
Praxair Inc. v. Risinger Brothers Transfer Inc.	U.S. District Court, Southern District	OH	3:15-CV-00277		08/24/16
Estrada v. Bukaty & Rotex Transportation	U.S. District Court	WY	14-CV-242	10/17/16	

David W. Lohf
Expert Testimony

2004

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
Wise v. Douglas, et al	Court of Common Pleas	OH	02-PI-842		03/01/04

2014

<u>CASE NAME</u>	<u>COURT</u>	<u>STATE</u>	<u>DOCKET</u>	<u>TRIAL</u>	<u>DEPOSITION</u>
Kicklighter v. FeeneyXpress Transport, et al.	U.S. District Court	NE	8:13-CV-00287		09/03/14